



**UNIVERSITI PUTRA MALAYSIA**

**VISUAL ASSESSMENT OF THE QUALITY OF LANDSCAPE DESIGN  
IN PAYA INDAH WETLANDS, MALAYSIA**

**MOHD KHER BIN HUSSEIN.**

**FRSB 2005 1**

**VISUAL ASSESSMENT OF THE QUALITY OF  
LANDSCAPE DESIGN IN PAYA INDAH  
WETLANDS, MALAYSIA**

**MOHD KHER BIN HUSSEIN**

**MASTER OF SCIENCE  
UNIVERSITI PUTRA MALAYSIA**

**2005**



---

**VISUAL ASSESSMENT OF THE QUALITY OF LANDSCAPE DESIGN IN  
PAYA INDAH WETLANDS, MALAYSIA**

**By**

**MOHD KHER BIN HUSSEIN**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in  
Fulfillment of the Requirements for the Degree of Master Science**

**November 2005**

---



## **DEDICATION**

Dedicate to my beloved family: parents, three daughters named Nurliyana Azlin, Nurathirah Amiza, Nursyahirah Aina and son named Muhammad Najmi Aiman.

Specially dedicated to my wife, Norhayati Binti Bakeri, for her unfailing patience and encouragement.

## **ABSTRACT**

---

Abstract of this thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Master of Science

### **VISUAL ASSESSMENT OF THE QUALITY OF LANDSCAPE DESIGN IN PAYA INDAH WETLANDS, MALAYSIA**

By

**MOHD KHER BIN HUSSEIN**

**November 2005**

**Chairman: Associate Professor Noorizan Mohamed, PhD**

**Faculty: Design And Architecture**

Visual quality of landscape is becoming an important element in eco-friendly design for nature-based tourism areas in Malaysia. However, the majority of the man-made landscape elements of nature-based tourism areas such as buildings do not harmonize with the natural environment and are considered as not eco-friendly in design. A study was conducted in Paya Indah Wetlands aimed at assessing visual rating and perception of the man-made landscape using expert judgment technique. This study used selected photographs of the man-made landscape elements in Paya Indah Wetlands representing different types of buildings, park furniture, parking features, pedestrian facilities, drainage and signage. The scoring scheme for visual quality and landscape features was valued using the six basic design elements, namely, form, line, colour, texture, shape and space. Data were gathered from 100 experts using a structured questionnaire with surrogated photos, distributed equally among landscape architects and architects. The

results revealed that the visual quality of Paya Indah Wetlands were categorized as moderate in quality, and some of the elements were considered as of poor quality. The results of regression analysis revealed that the visual rating was affected significantly by the respondents' age, sector of employment and professional memberships in certified bodies. The Mann-Whitney and Kruskal-Wallis test revealed that the differences in visual rating differed with regards to the education background, sector of employment and professional membership. From the results, the basic design elements (form, line, colour, texture, shape and space) should be taken into consideration at the early stage in the design process to lend a higher visual quality to the wetland landscape of Paya Indah Wetlands.

## **ABSTRAK**

---

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

### **VISUAL ASSESSMENT OF THE QUALITY OF LANDSCAPE DESIGN IN PAYA INDAH WETLANDS, MALAYSIA**

Oleh

**MOHD KHER BIN HUSSEIN**

**November 2005**

**Pengerusi: Profesor Madya Noorizan Mohamed, PhD**

**Fakulti: Reka Bentuk Dan Senibina**

Kualiti visual landskap menjadi elemen penting di dalam reka bentuk mesra-alam untuk projek pelancongan berteraskan alam semulajadi di Malaysia. Namun begitu, kebanyakan elemen landskap buatan manusia seperti bangunan tidak harmoni dengan persekitaran semulajadi, dan dianggap tidak mesra-alam dari segi reka bentuk. Kajian telah dijalankan di Paya Indah Wetland untuk menentukan nilai visual dan mengetahui tanggapan ke atas elemen landskap buatan manusia menggunakan teknik penilaian pakar. Kajian ini menggunakan photo elemen landskap buatan manusia terpilih di Paya Indah Wetland mewakili pelbagai jenis bangunan, perabot taman, “parking features”, kemudahan pejalan kaki, perparitan dan papan tanda. Skema pemarkahan untuk kualiti visual dan ciri landskap dinilai menggunakan enam faktor asas reka bentuk iaitu “form”, garisan, warna, tekstur, bentuk dan ruang. Data diperolehi daripada 100 orang pakar di mana 50 orang pakar terdiri dari landskap arkitek dan 50 yang lainnya adalah arkitek.

Hasil kajian mendapati kualiti visual di Paya Indah Wetland dikategorikan di tahap sederhana dan ada elemen dinilai sebagai berkualiti rendah. Analisis regresi menunjukkan faktor umur, sektor pekerjaan dan keahlian di dalam badan profesional yang diiktiraf mempengaruhi penilaian kualiti visual. Ujian Mann-Whitney dan Kruskal-Wallis menunjukkan perbezaan di dalam penilaian kualiti visual terdapat di dalam kumpulan faktor pendidikan, sektor pekerjaan dan keahlian di dalam badan profesional. Hasil kajian mensasarkan yang elemen asas reka bentuk (“form”, garisan, warna, tekstur, bentuk dan ruang) perlu diambil kira di peringkat awal proses mereka bentuk untuk meningkatkan kualiti visual landskap Paya Indah Wetlands.



## **Acknowledgements**

I wish to express my gratitude and sincere thanks to my supervisor, Associate Professor Dr. Noorizan Bte Mohamed, for her persistent guidance, assistance, support and understanding throughout the study period.

Gratitude and thanks are also extended to all members of the graduate committee, Associate Professor Dr. Awang Noor Bin Abd. Ghani and Dr. Kamariah Bte Dola for their constructive comments, advice and guidance.

Special thanks are due to Cik Haslayati Bte Hashim, Educational Officer in Paya Indah Wetlands, for her time and sincere in giving me information and cooperation throughout the field study period. Thanks are also extended to her for giving me permission to use the study area and providing data and other useful information. My gratitude is also due to the staff of the Faculty of Design and Architecture for their contribution in this research.

Finally, I wish to express special thanks to my family and others for their support and encouragement, especially to my beloved wife for her encouragement, prayer, support and understanding for making this study possible.

## **APPROVAL**

I certify that an Examination Committee met on 9<sup>th</sup> September 2005 to conduct the final examination of Mohd Kher Bin Hussein on his Master of Science thesis entitled “Visual Assessment of the Quality of Landscape Design in Paya Indah Wetlands, Malaysia” in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

**Elias @ Ilias Bin Salleh, Ph.D.**

Professor

Faculty of Design and Architecture

Universiti Putra Malaysia

(Chairman)

**Azizi Bin Hj. Muda, Ph.D.**

Associate Professor

Faculty of Environmental Studies

Universiti Putra Malaysia

(Internal Examiner)

**Ahmad Bin Shuib, Ph.D.**

Associate Professor

Faculty of Economics and Management

Universiti Putra Malaysia

(Internal Examiner)

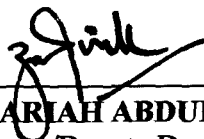
**Noor Azlin Bte Yahya**

Lecturer

Urban Forestry and Recreational Program

Forest Research Institute Malaya

(External Examiner)

  
\_\_\_\_\_  
**ZAKARIAH ABDUL RASHID, Ph.D.**  
Professor/Deputy Dean  
School of Graduate Studies  
Universiti Putra Malaysia

Date: 27 DEC 2005

## **APPROVAL**

This thesis submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Master Science. The members of the Supervisory Committee are as follows:

**NOORIZAN MOHAMED, Ph.D.**

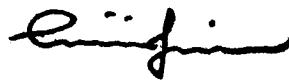
Associate Professor  
Faculty of Design And Architecture  
Universiti Putra Malaysia  
(Chairman)

**AWANG NOOR ABD. GHANI, Ph.D.**

Associate Professor  
Faculty of Forestry  
Universiti Putra Malaysia  
(Member)

**KAMARIAH DOLA, Ph.D.**

Lecturer  
Faculty of Design And Architecture  
Universiti Putra Malaysia  
(Member)



---

**AINI IDERIS, Ph.D.**

Professor/Dean  
School of Graduate Studies  
Universiti Putra Malaysia

Date: 12 JAN 2006

## **DECLARATION**

I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.



**MOHD KHER BIN HUSSEIN**

Date: 26./2. 2005

## TABLE OF CONTENTS

	<b>Page</b>
<b>DEDICATION</b>	ii
<b>ABSTRACT</b>	iii
<b>ABSTRAK</b>	v
<b>ACKNOWLEDGEMENTS</b>	vii
<b>APPROVAL</b>	viii
<b>DECLARATION</b>	x
<b>TABLE OF CONTENTS</b>	xi
<b>LIST OF TABLES</b>	xiii
<b>LIST OF FIGURES</b>	xv
<b>GLOSSARY OF TERMS</b>	xx
 <b>CHAPTER</b>	
 <b>1 INTRODUCTION</b>	 1
1.0 General Background	1
1.1 Wetland Landscape	7
1.2 Wetland Landscape Destruction	11
1.3 Research Methods of Landscape Evaluation	14
1.4 Problem Statement	16
1.5 Research Objectives	18
1.6 Scope of the Study	19
1.7 Limitations of the Study	20
 <b>2 THEORITICAL FRAMEWORK OF LANDSCAPE EVALUATION</b>	 22
2.0 Introduction	22
2.1 Definitions of Landscape Evaluation	22
2.2 The Importance of Landscape Evaluation	24
2.3 Visual Quality Assessment	25
2.4 Landscape Evaluation Methods	26
2.5 Expert Judgment Approach in Assessing Landscape Visual Quality	29
2.6 Landscape Evaluation: Bureau of Land Management (BLM) Approach	31
2.7 Past Studies on Landscape Evaluation	33
 <b>3 RESEARCH METHODS</b>	 41
3.0 Approach of the Study	41
3.0.1 Observation Study	41
3.0.2 Survey Method	42
3.1 Research Process	44
3.2 Location of the Study	46
3.3 Instrument	48
3.4 Evaluation Procedures	49
3.5 Pilot Study	53
3.6 Data Processing and Analysis	53



<b>4</b>	<b>RESULTS OF OBSERVATION STUDY</b>	
4.0	Introduction	56
4.1	Observation on Landscape Features of Paya Indah Wetland	56
4.1.1	Flora of Paya Indah Wetland	59
4.1.2	Fauna of Paya Indah Wetland	63
4.1.3	Lakes and Peat Swamp of Paya Indah Wetland	66
4.2	Visual of Existing Environment	70
4.3	Design Characteristics of Man-Made Landscape Elements	77
<b>5</b>	<b>RESULTS OF EXPERT EVALUATION OF MAN-MADE LANDSCAPE ELEMENTS</b>	
5.0	Introduction	88
5.1	Respondents Background	88
5.2	Visual Rating (VR)	91
5.2.1	Visual rating for man-made landscape elements	91
5.2.2	Differences of visual rating	94
5.3	Results of Regression Analysis	98
5.4	Visual Quality	101
<b>6</b>	<b>DISCUSSION OF FINDINGS</b>	
6.0	Introduction	104
6.1	Qualitative Evaluation of Landscape Features of Paya Indah Wetland	105
6.1.1	Flora	105
6.1.2	Fauna	107
6.1.3	Lakes and peat swamp	108
6.2	Visual of Existing Environment	109
6.3	Design Characteristics of Man-Made Landscape Elements	112
6.4	Expert Evaluation Survey	116
6.4.1	Respondents background	116
6.4.2	Visual rating	120
6.4.2.1	Visual rating for man-made landscape elements	120
6.4.2.2	Differences of visual rating	123
6.4.3	Factors Affecting Visual Rating	126
6.4.4	Visual Quality	128
<b>7</b>	<b>CONCLUSION</b>	131
	<b>REFERENCES</b>	137
	<b>APPENDICES</b>	144
	Appendix 1 List of Flora Species at Paya Indah Wetlands	144
	Appendix 2 List of Fauna Species at Paya Indah Wetlands	149
	Appendix 3 Evaluation Form	159
	Appendix 4 Photos to Evaluate	164
	Appendix 5 Wetland Classification	181
	Appendix 6 Recommendations and Guidelines	184
	<b>BIODATA OF THE AUTHOR</b>	207

## LIST OF TABLES

	<b>Page</b>
Table 3.1: Explanation of Variables and Rating Score	50
Table 3.2: Visual Quality Class	51
Table 5.1: Respondents demography	89
Table 5.2: Visual Rating (VR) of Man-Made Landscape Elements	91
Table 5.3: Analysis of the Six Basic Design Elements	93
Table 5.4: Differences in Evaluation Between Educations (Mann-Whitney Test)	95
Table 5.5: Differences in Evaluation Between Sectors of Work (Mann-Whitney Test)	97
Table 5.6: Differences in Evaluation Between Professional Memberships (Mann-Whitney Test)	98
Table 5.7: Descriptive Statistics of Variables Used in the Analysis	99
Table 5.8: Results of the Regression Analysis	100
Table 5.9: Visual Quality Class of Man-Made Landscape Elements in Paya Indah Wetlands	101
Table 5.10: Percentage of Visual Rating (VR) According to Man-Made Landscape Elements	102
Table A1: List of Flora Species at Paya Indah Wetlands (Resource : <i>Laporan Teknikal Rancangan Tempatan Kawasan Sekitar Paya Indah Wetland Sanctuary Selangor Darul Ehsan (1999 – 2010), April 2000. Majlis Daerah Kuala Langat, Selangor</i> ).	144

Table A2:	List of Fauna Species at Paya Indah Wetlands  (Resource: <i>Laporan Teknikal Rancancangan Tempatan Kawasan Sekitar Paya Indah Wetland Sanctuary Selangor Darul Ehsan (1999 – 2010), April 2000.Majlis Daerah Kuala Langat, Selangor).</i>	149
Table A3.1:	Descriptor Variables	161
Table A5.1:	Wetland Classification (Source: Dugan, 1990, modified after Scott (1989a))	182



## LIST OF FIGURES

	<b>Page</b>
Figure 1.1: A part of Paya Indah Wetlands that offers an aesthetic value (source: <a href="http://www.serumpun.com/regional/wetland/wetland.html">http://www.serumpun.com/regional/wetland/wetland.html</a> )	3
Figure 1.2: Signage and wakaf as examples of man-made landscape in wetland	4
Figure 1.3: A beautiful scenic view offered by the freshwater lake (source: Ministry of Science, Technology and the Environment, Malaysia, 2003)	8
Figure 1.4: An aerial photo of Sungai Pulai, Johor that provides landscape diversity (source: Ministry of Science, Technology and the Environment, Malaysia, 2003).	10
Figure 1.5: This picture shows that a part of wetlands in Malaysia is reduced by land reclamation for fishery activities (source: <a href="http://www.wetlands.org/capacity/WW/past/wwwvol-2/feature/iss10/feature.htm">http://www.wetlands.org/capacity/WW/past/wwwvol-2/feature/iss10/feature.htm</a> )	11
Figure 3.1: Research process	45
Figure 3.2: Key Plan of Paya Indah Wetlands (source: Zulkafli and Zahari, 2005)	46
Figure 3.3: Vegetation of surrounding Paya Indah (source: Bureau of Consultancy and Innovation, Universiti Kebangsaan Malaysia, 2001)	47
Figure 4.1: Existing landscape of the Paya Indah lakes	57
Figure 4.2: In the distance is the abandoned tin mining machine. This shows that Paya Indah has historical values for the country	58
Figure 4.3: Peat swamp forests in Paya Indah Wetlands (Courtesy of Paya Indah Wetlands)	59

Figure 4.4:	Some of the trees that have been planted by the management	60
Figure 4.5:	The Palm World in Paya Indah	60
Figure 4.6:	<i>Ficus nitida</i> is planted shrubs that can be found	61
Figure 4.7:	Lotus is the major aquatic plant that can be found in Paya Indah lakes	62
Figure 4.8:	<i>Eleocharis dulcis</i> in the shallow lakes in Paya Indah area	62
Figure 4.9:	Paya Indah lakes are rich with flora and fauna	63
Figure 4.10:	Purple Heron/Pucung Serandau	64
Figure 4.11:	<i>Tempua</i> nests	64
Figure 4.12(a and b):	Hippo, and buffaloes amongst the animals found in Paya Indah Wetlands (courtesy of Cecilia Lim)	65
Figure 4.13:	One of the lakes found in Paya Indah Wetlands	66
Figure 4.14:	Aquatic plants that grow in shallow lakes	67
Figure 4.15:	Beautiful lotus flowers in Paya Indah Lake	67
Figure 4.16:	Lakes of Paya Indah provide for recreational activities	68
Figure 4.17:	Lakes of Paya Indah Wetlands are stocked with many varieties of fish	68
Figure 4.18:	Lakes and peat swamp forests that are rich in biodiversity at Paya Indah Wetlands	69
Figure 4.19:	Beautiful view of Typha Lake	71
Figure 4.20:	Entrance of Paya Indah Wetlands	71
Figure 4.21:	Paya Indah information and administration center	72
Figure 4.22:	Hippos' house in Paya Indah Wetlands	72

Figure 4.23	Beautiful view of the palm garden	73
Figure 4.24:	Nice view of the greenery	74
Figure 4.25:	Rumah Melayu offers a great view of the lakes and peat swamp forest	75
Figure 4.26:	A good visual quality of the chalets area	75
Figure 4.27:	A historical tin dredge in Paya Indah (courtesy of Paya Indah Wetlands)	76
Figure 4.28:	View of the Albatross of Paya Indah Wetlands	77
Figure 4.29:	The characteristics of Rumah Melayu Terengganu	78
Figure 4.30:	The Balinese Chalet design of Paya Indah Wetlands	79
Figure 4.31:	The Albatross wall displays coarse texture and has Balinese influence	80
Figure 4.32 (a, b, and c):	A square design of park's furniture in Paya Indah Wetlands	81
Figure 4.33:	Features of open parking in Paya Indah Wetlands	82
Figure 4.34:	Covered parking at parking area	82
Figure 4.35:	Guard house at parking area (entrance of Paya Indah Wetlands)	83
Figure 4.36:	Boardwalk on the shallow Paya Indah lakes	83
Figure 4.37:	Covered walkway	84
Figure 4.38:	Pedestrian around the chalet area	84
Figure 4.39:	Jetty for pedestrian accommodation in Paya Indah Wetland	85
Figure 4.40:	Signage that is built from zinc material	86
Figure 4.41:	Signage that is built from bricks and cement	86
Figure 4.42:	Signage that is built from stainless steel	87

Figure 4.43:	Another signage that is built from wood / timber	87
Figure 6.1:	An aligned wakaf with the lake edge can help to tie it into the landscape against the natural line	114
Figure A6.1 :	Every possible attempt should be made to design in a manner that will not disturb existing peat swamp areas.	187
Figure A6.2 :	Old mining sites, when properly developed, can be an opportunity for visual enhancement in the area.	187
Figure A6.3 :	Planting concepts for lake edge to increase visual quality	188
Figure A6.4 :	Trails should be imaginatively treated with natural materials	189
Figure A6.5:	An example of colour usage for a building that is in harmony with the surrounding, deliberately simple and natural.	193
Figure A6.6:	An example of the texture of a building that is pleasing, gives comfortable feeling and touch. Pine trees serve as a contrasting backdrop for the log's texture and abundant wildflowers complement the logs with the ever-changing colors of nature.	194
Figure A6.7:	An example of architectural shape that is simple shed design with the roof tilting up towards the view. Materials are left exposed and detailed to express their natural properties. The form is blended with the environment and has the spirit of the place.	195
Figure A6.8 :	The building in this sketch is aligned with the woodland edge which helps draw the eye to it creating a focal composition. There is good light, orientation and access. The position against the line helps to tie it into the landscape and it does not occupy as much	

space of the area.	196
Figure A6.9 : Car park layout	198
Figure A6.10: Imaginative entrance to the park	199
Figure A6.11: Typical light fitting for parking area	199
Figure A6.12 :Guard house with elaborate traditional style complementing the tropical planting provides a strong identity to the park development	200
Figure A6.13: Drain in grass area	201
Figure A6.14: Grass swale	202
Figure A6.15 : Road signage that portrays traditional craft	203
Figure A6.16 :Information signage that portrays traditional roof design	204
Figure A6.17 : Examples of signage symbols	204

## **GLOSSARY OF TERMS**

<b>AGE</b>	<b>=</b>	<b>Age</b>
<b>BLM</b>	<b>=</b>	<b>Bureau of Land Management</b>
<b>BT</b>	<b>=</b>	<b>Building Types</b>
<b>DR</b>	<b>=</b>	<b>Drainage</b>
<b>EDU</b>	<b>=</b>	<b>Education</b>
<b>ELITE</b>	<b>=</b>	<b>Expressway Lingkaran Tengah</b>
<b>EXP</b>	<b>=</b>	<b>Experience</b>
<b>GEN</b>	<b>=</b>	<b>Gender</b>
<b>ILAM</b>	<b>=</b>	<b>Institute Landscape Architect Association of Malaysia</b>
<b>KLIA</b>	<b>=</b>	<b>Kuala Lumpur International Airport</b>
<b>LAM</b>	<b>=</b>	<b>Lembaga Arkitek Malaysia</b>
<b>LDP</b>	<b>=</b>	<b>Lebuhraya Damansara-Puchong</b>
<b>MNS</b>	<b>=</b>	<b>Malaysian Nature Society</b>
<b>OLS</b>	<b>=</b>	<b>Ordinary Least Square</b>
<b>PAM</b>	<b>=</b>	<b>Institute Architect Malaysia</b>
<b>PF</b>	<b>=</b>	<b>Park Furniture</b>
<b>PFe</b>	<b>=</b>	<b>Parking Features</b>
<b>PhD</b>	<b>=</b>	<b>Philosophy of Doctorate</b>
<b>PROF</b>	<b>=</b>	<b>Professional memberships</b>
<b>SEC</b>	<b>=</b>	<b>Sector of work</b>
<b>SG</b>	<b>=</b>	<b>Signage</b>
<b>SPSS</b>	<b>=</b>	<b>Statistical Programs for Social Science</b>

TV3 = Sistem Television Malaysia Berhad

VR = Visual rating

VRM = Visual Resource Management

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.0 General Background**

Malaysia is a very fast-developing country. Although there are improvements in the area of technology, Malaysia faces degradation in term of quality of visual landscape quality, especially in wetland areas. According to the Asian Wetland Bureau's report, a total of 1,076,670 hectares of wetlands in Peninsular Malaysia in 1966 has been reduced to 977,004 hectares in 1974 because of development. Overall wetland area in Peninsular Malaysia is peat swamp, where the original coverage is approximately one million hectares. However, this area has been reduced to 559,862 hectares in 1982. In 1991, the total extent of peat swamp under Permanent Forest Estate is 210,395 hectares (Shamsudin, Ismail & Samsudin, 2000). This indirectly has resulted in the degradation of the scenic beauty of the wetlands that are rich with aesthetic values, as well as degradation of visual quality of our environment.

The Ministry of Science, Technology and the Environment, Malaysia (2003), defines wetlands (similar to the Ramsar Convention's definition) as areas of marsh, fern, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salty, including areas of marine water, the depth of which at low tide does not exceed six meters. This definition



encompasses coastal and shallow marine areas (including coral reefs), as well as river courses and temporary lakes or depressions in semi-arid zones.

The Ramsar Convention (1972) provides that they “may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six meters at low tide lying within the wetlands”. So, under Ramsar Convention, wetlands are everywhere, and it is probably simplest to think of the Convention as having an interest in the management of all water ecosystems (whether permanent or temporary) that are not deep marine waters.

Wetlands provide high value of natural landscape resources and are aesthetic in terms of cultural values, human activities, wildlife, plants, religion and history. They also provide opportunities for ecotourism and recreational activities such as bird watching, fishing, kayaking and boating.

One of the wetlands that has played an important role in Malaysia's environment is Paya Indah Wetlands, Dengkil, Selangor. The area is a green lung of the Multimedia Super Corridor. It presents a mix of ecosystems for a diverse range of flora and fauna and is a habitat for bird population both local and migratory (Zulkafli and Zahari, 2005). This area has a very unique scenic value and offers good recreational activities such as nature study, bird watching, painting and photography. This wetland encompasses a myriad of landscapes, including large open lakes, peat swamp forests, and abandoned mining land. This area has remarkable natural resources and a splendid natural setting. It provides aesthetic values to the area, as well as a